



PATENT
Docket No.: 19603/1656 (CRF D2093C)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Scott S. Campbell and Patricia J. Murphy

Serial No. : 09/656,409

Cnfrm. No. : 9516

Filed : September 6, 2000

For : NON-OCULAR CIRCADIAN CLOCK
RESETTING IN HUMANS

Examiner:
William H. Matthews

Art Unit:
3738

DECLARATION OF SCOTT S. CAMPBELL
UNDER 37 CFR § 1.132

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

I, SCOTT S. CAMPBELL, declare:

1. I am a Professor in the Department of Psychiatry at Cornell University Medical Center.

2. For the past 20 years, my research has focused on examining the effects of light exposure on the circadian (daily) rhythms and sleep of humans. My work has been funded by the National Institutes of Health, the Nuclear Regulatory Commission, the United States Army, the Lighting Research Foundation, the American Health Assistance Foundation and a number of corporations, including Exxon, ARCO and the Liberty Mutual Insurance Company. I have published a number of articles on the topic in peer-reviewed scientific journals and I served on the Task Force on Light Treatment for Sleep Disorders commissioned jointly by the American Sleep Disorders Association and the Society for Light Treatment and Biological Rhythms. The Task Force produced seven mini-review articles that are routinely used to establish guidelines for the safe and effective use of light treatment for sleep disturbance. I have given invited lectures on light treatment at numerous national and international meetings and I am frequently quoted in the popular press with regard to light- and circadian rhythms-related topics. I currently serve as Chairman of the Biobehavioral Mechanisms of Stress and Health Review Committee of the National Institutes

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of Health and I am a member in good standing of the Society for Research on Biological Rhythms, the American Association of Professional Sleep Societies and the European Society for Sleep Research.

3. I am a joint inventor of the above-identified patent application and am submitting this affidavit in response to an Office Action dated December 2, 2003 from the U.S. Patent and Trademark Office.

4. It is well known that resetting a human circadian clock has a substantial and well established utility in treating disorders associated with a biological rhythm disturbance and for enhancing alertness and performance.

5. I have reviewed the study set forth in the article entitled, "Absence of Circadian Phase Resetting in Response to Bright Light Behind the Knees" by Wright Jr. and Czeisler (Science Magazine 297 (5581) 571) (Czeisler Science Magazine Article) and it is not a replication of the work set forth in the above-identified patent application.

6. The suggestion in the Czeisler Science Magazine Article that ocular exposure to light is required for resetting the circadian clock is contradicted by our findings as set forth in the above-identified patent application and in our publications: Campbell SS and Murphy PJ, "Extraocular Circadian Phototransduction in Humans," Science, 279:396-399, 1998; Campbell SS and Murphy PJ, "Circadian Clock Resetting In Humans By Extraocular Light Exposure," Biological Effects of Light, 1998, edited by MF Holick and EG Jung Boston, Kluwer Academic Publishers, 389-395, 1999; Campbell SS, Murphy PJ and Suhner A, "Extraocular Phototransduction And Circadian Timing Systems In Vertebrates," Chronobiology International, 18(2): 137-172, 2001; and Murphy PJ and Campbell SS, "Enhancement of REM sleep during extraocular light exposure in humans," American Journal of Physiology, 280: R1606-R1612, 2001.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 6/1/4


Scott S. Campbell